

ABSTRACT

A technique for controlling the frequency allocation in the hop sequence of a frequency hopping digital communications system is presented. The hop sequence is initially formed such that consecutive channels are likely to differ substantially in frequency. Therefore, channel substitution commands can be transmitted twice on consecutive hops without acknowledgement, inasmuch as the likelihood of a broadband noise source blocking consecutive channels is reduced. The number of channels identified as requiring substitution in the hop sequence is monitored, such that a hop sequence repair operation or communications link termination can be implemented if channel substitution data traffic becomes too great.

Approved for public release; distribution is unlimited.